

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A sub-atmospheric downstream pressure control apparatus, characterized by:

a first flow restricting element (FRE), wherein said first FRE is an immobile flow restricting element;

a pressure control chamber (PCC) located in serial fluidic communication downstream from said first FRE;

a second FRE located in serial fluidic communication downstream from said PCC;

a gas source; and

a flow controlling device in serial fluidic communication downstream from said gas source and upstream from said PCC.

2. (Previously presented) A sub-atmospheric downstream pressure control apparatus as in claim 1 further characterized by:

a reactive gas source connected in serial fluidic communication upstream from said PCC; and

an abatement element located within said PCC.

3. (Previously presented) A sub-atmospheric downstream pressure control apparatus as in claim 1 further characterized by:

a third FRE connected in serial fluidic communication downstream from said PCC;

an abatement chamber connected in serial fluidic communication upstream from said third FRE;

a reactive gas source connected in serial fluidic communication upstream from said abatement chamber; and

an abatement element disposed within said abatement chamber.

4. (Previously presented) A sub-atmospheric downstream pressure control apparatus as in claim 1 wherein a process chamber is located in serial fluidic communication upstream from said first FRE;

said process chamber and said PCC are formed as compartments within a single process vessel; and

said first FRE is formed within the partition between said process chamber and said PCC.

5. (Currently amended) A wafer processing apparatus comprising a process chamber, said apparatus characterized by[[;]] :

a process reactive gas supply line from a process gas source in serial fluidic communication upstream from said process chamber;

an upstream flow control device located in serial fluidic communication upstream from said process chamber and downstream from said process gas source;

a first flow restricting element located in serial fluidic communication downstream from said process chamber, wherein said first FRE is an immobile flow restricting element;

a pressure control chamber (PCC) located in serial fluidic communication downstream from said first FRE;

a second FRE ~~(206)~~ located in serial fluidic communication downstream from said PCC;
a gas source; and

a flow controlling device in serial fluidic communication downstream from said gas source and upstream from said PCC.

6. (Previously presented) A sub-atmospheric downstream pressure control apparatus as in claim 5 further characterized by:

a reactive gas source connected in serial fluidic communication upstream from said PCC;
and

an abatement element located within said PCC.

7. (Previously presented) A sub-atmospheric downstream pressure control apparatus as in claim 5 further characterized by:

a third FRE connected in serial fluidic communication downstream from said PCC;
an abatement chamber connected in serial fluidic communication upstream from said third FRE;

a reactive gas source connected in serial fluidic communication upstream from said abatement chamber; and

an abatement element located within said abatement chamber.

8. (Previously presented) A sub-atmospheric downstream pressure control apparatus as in claim 5 wherein a process chamber is located in serial fluidic communication upstream from said first FRE;

said process chamber and said PCC are formed as compartments within a single process vessel; and

said first FRE is formed within the partition between said process chamber and said PCC.

9. (Original) A sub-atmospheric downstream pressure control apparatus as in claim 5 wherein said process is LPCVD.

10. (Original) A sub-atmospheric downstream pressure control apparatus as in claim 5 wherein said process is RIE.

11. (Original) A sub-atmospheric downstream pressure control apparatus as in claim 5 wherein said process is PECVD.

Claims 12 – 15 (Withdrawn)

16. (Currently amended) A sub-atmospheric downstream pressure control apparatus comprising:

- (a) a first flow restricting element (FRE), wherein said first FRE is an immobile flow restricting element;
- (b) a pressure control chamber (PCC) located in serial fluidic communication downstream from said first FRE;
- (c) a second FRE located in serial fluidic communication downstream from said PCC;
- (d) a gas source (208);
- (e) a flow controlling device in serial fluidic communication downstream from said gas source and upstream from said PCC;
- (f) a reactive gas source connected in serial fluidic communication upstream from said PCC; and
- (g) an abatement element located within said PCC.